# DAG-TM ACFS – Crew Roles and Responsibilities

## FLIGHT ENVIRONMENT

For the purposes of this study, the flight environment is assumed to be one of "high traffic density/terrain critical." Both pilots and a flight crew observer should be present on the ACFS flight deck for the duration of each scenario.

## AIRCRAFT CONFIGURATION

The autopilot, autothrottles, and FMS should be used for all DAG-TM scenarios. The aircraft should not be hand-flown, except when deemed essential to completion of a flight scenario or specific flight task.

## ASSIGNMENT OF CREW ROLES

Prior to commencing each scenario, a Pilot Flying (PF) and Pilot Not Flying (PNF) will be designated. The PF will be the Pilot-In-Command (***regardless of seat assignment***).

Ideally, the flight crew assigned to the ACFS for the duration of the study will take turns assuming each role. In the event a scenario is abandoned due to a technical problem or procedural error, the rotation should be adjusted so that each pilot flies the same approximate number of complete scenarios in each of the two roles.

## CREW DUITIES / RESPONSIBILITIES

The duties and responsibilities of each ACFS crew member are outlined below. Three broad areas are detailed: 1) General Responsibilities, 2) MCP and CDU, and 3) CDTI .

## 1. GENERAL RESPONSIBILITIES

### PILOT FLYING

The Pilot Flying should devote primary attention to the control and navigation of the aircraft with regard to terrain, weather, traffic, and aircraft configuration. The PF will call for checklists and charts at the appropriate times.

### PILOT NOT FLYING

The Pilot Not Flying monitors the Pilot Flying, in addition to undertaking the following duties:

Administering checklists.

Radio tuning and communications with ATC.

Programming the FMS (before and during a scenario).

Making navigation charts available at the appropriate times.

Executing instructions from the PF as they relate to aircraft configuration.

## 2. MCP AND CDU

Both pilots should maintain awareness of the autopilot status – it should be engaged at all times. All MCP and CDU inputs should be coordinated with, and verified by the other pilot.

### MODE CONTROL PANEL AND CDU

The PF directs the PNF to make all inputs, to be confirmed by the PF.

## 3. CDTI

Only one pilot will be head-down 'working' the CDTI at any time. ***If the PF must 'work' the CDTI, he or she must transfer positive control of the aircraft to the other pilot.***

### PILOT FLYING

At no time must CDTI use compromise the primary PF task of *control and navigation of the aircraft with regard to terrain, weather, traffic, and aircraft configuration*.

The PF should verify all CDTI inputs made by the PNF. Examples requiring PF confirmation include RTA entry, course changes trial-planned by the PNF, and PDA Spacing, in all cases ***prior*** to execution through the CDU.

Upon entry of an RTA (by the PNF), the PF should use the CDTI to monitor conformance/compliance.

The PF ***is*** encouraged to use the CDTI for aircraft safety assessment, relative to proximal traffic.

### PILOT NOT FLYING

***The PNF has primary responsibility for management of, and inputs to, the CDTI.*** These include, but are not necessarily limited to:

Entry of RTA times.

Trial-planning route modifications required to achieve an RTA.

Entry of PDA Spacing data.

The Pilot Not Flying is required to verify CDTI inputs affecting the aircraft's control and/or navigation with the PF, ***prior*** to execution in the CDU.

After entry of an RTA, route change, or PDA Spacing into the CDTI and subsequent execution in the CDU, the PNF is responsible for monitoring the CDTI and other control elements as they reflect conformance and/or compliance with ATC requirements. In the event corrective action is deemed required, the PNF will alert the PF.